AMENDMENTS

Listing of Claims

The following listing of claims replaces all previous listings or versions thereof:

1. (Previously presented) A method for selecting a eukaryotic host cell that expresses a desired antibody or antibody fragment from a plurality of eukaryotic host cells expressing candidate antibodies or antibody fragments, the method comprising the steps of:

   (a) obtaining a library of vectors that encode a plurality of distinct candidate antibodies or antibody fragments, wherein said vector provides for the cell surface expression of said candidate antibodies or antibody fragments;
   (b) expressing each of said plurality of candidate antibodies or antibody fragments on the surface of a host cell; and
   (c) selecting a host cell that expresses a desired antibody or antibody fragment.

2. (Previously presented) The method of claim 1, wherein said eukaryotic host cell is a yeast, mold or algae cell.

3. (Previously presented) The method of claim 1, wherein said eukaryotic host cell is an insect cell.

4-5. (Canceled)

6. (Previously presented) The method of claim 1, wherein selecting a host cell that expresses a desired antibody comprises the steps of:

   (a) contacting said antibody- or antibody fragment-expressing cells with a selected antigen; and
   (b) identifying a host cell that binds to said selected antigen.

7. (Original) The method of claim 6, wherein the antigen is labeled.

8. (Original) The method of claim 7, wherein the label is a fluorescent or chemilluminescent label.

9. (Original) The method of claim 6, wherein said selected antigen is located on the surface of a cell other than said host cell, and said host cell that binds to said selected antigen is identified by a method comprising the steps of:

(a) contacting said host cell with said cell expressing or having conjugated thereto said selected antigen; and
(b) identifying a host cell bound to said cell expressing or having conjugate thereto said selected antigen.

10. (Original) The method of claim 9, further comprising size sorting of bound cells following the step of contacting said host cell with said cell expressing or having conjugated thereto said selected antigen.

11. (Previously presented) The method of claim 6, wherein said vector library is obtained by a method comprising the steps of:

(a) administering to an animal an immunologically effective amount of a composition comprising a selected antigen;
(b) obtaining from the animal a plurality of distinct DNA segments that encode distinct antibodies or antibody fragments; and
(c) incorporating said plurality of DNA segments into a plurality of expression vectors, the vectors expressing antibodies or antibody fragments on the outer membrane surface of a host cell.

12. (Original) The method of claim 11, wherein said plurality of DNA segments are obtained by a method comprising the steps of:

(a) isolating mRNA from antibody-producing cells of said animal;

(b) amplifying a plurality of distinct RNA segments using a set of nucleic acid primers having sequences complementary to antibody constant region or antibody framework region nucleic acid sequences; and

(c) preparing a plurality of distinct DNA segments having sequences complementary to said amplified RNA segments.

13-14. (Canceled)

15. (Previously presented) The method of claim 1, wherein said selected cells that express a desired antibody are subjected to cleavage to release the selected antibody or antibody fragment from the surface of the outer membrane.

16-17. (Canceled)

18. (Previously presented) The method of claim 17, wherein said selected antigen is linked to a fluorescent label, a chemilluminescent label, a radioactive label, biotin, avidin, a magnetic bead or an enzyme that generates a colored product upon contact with a chromogenic substrate.

19. (Original) The method of claim 18, wherein said cells that bind to said selected antigen are identified by a method comprising the steps of:

(a) contacting said plurality of cells with said detectably labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) removing non-specifically bound antigen from said cells; and

(c) identifying the antibody- or antibody fragment-expressing cells by detecting the presence of the bound detectable label.

20. (Original) The method of claim 19, wherein said cells that bind to said selected antigen are identified by a method comprising the steps of:

(a) contacting said plurality of cells with a fluorescently labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) subjecting said cells to automated cell sorting; and

(c) identifying the desired antibody or antibody fragment by detecting the fluorescently labeled sorted cells.

21. (Original) The method of claim 20, wherein said cells are subjected to sorting by flow cytometry.

22. (Original) The method of claim 20, wherein said cells are subjected to a first and a second round of automated cell sorting.

23. (Original) The method of claim 22, wherein regrowth of sorted cells is conducted between said first and said second rounds of cell sorting.

24. (Original) The method of claim 22, wherein said cells are subjected to a third and a fourth round of automated cell sorting.

25. (Original) The method of claim 18, wherein said selected antigen is linked to a magnetic bead.

26. (Currently amended) The method of claim 25, wherein cells that ~~band~~bind said antigen are selected are identified by a method comprising the steps of:

(a) contacting said plurality of cells with said magnetic bead labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) subjecting said cells to magnetic sorting; and

(c) identifying the desired antibody- or antibody fragment by detecting the magnetic bead labeled sorted cells.

27-45. (Canceled)

46. (Previously presented) The method of claim 1, wherein said host cell is a mammalian cell.